

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

SEE WATERFLOOD FOLDER

DATE: FEB 02 1981

SUBJECT: Emission Exchange Proposal - ARCO/SOHIO

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New Source Permits Section

TO: File

As a result of the "swap", it was felt that an in-house explanation and table be constructed to accompany the modifications in the PSD-1 and Waterflood PSD permits.

Background:

The first PSD permit (PSD-1) initially allowed the construction of eleven gas-fired turbines. Of those turbines, two 50 Mw units were assigned to the Central Power Station (CPS). The two 50 Mw units were later replaced in the Increment II application with four 25 Mw Units. Since the total horsepower from the CPS remained at 100 Mw, the Company was allowed to make the change without adding these turbines to the Increment II permit. The resulting physical transfer of the four 25 Mw units and the deletion of two 50 Mw turbines at CPS elevated the total number of turbine units to thirteen.

Discussion:

To counteract the increase in emissions and air quality impacts from equipment associated with the additional Waterflood facilities, the Company proposed that specific turbines at designated sites in PSD-1 not be installed. For clarification, Table 1 was devised to demonstrate the breakdown in increases and decreases associated with the proposal. It can therefore be shown in the emission exchange proposal that eight turbines from PSD-1 will not be constructed in order to offset the additional turbines and heaters needed in the Waterflood project. The additional nine turbines and various sized heaters to be added to the Waterflood permit can therefore be used to elevate the seawater temperature from 40°F to 80° F. Because the total heater capacity will be attained with multiple heaters that have individual capabilities ranging from 25 to 250 MM BTU/hr, the permit has been changed to reflect the total heater output in lieu of the numerical heater count. The total heater output for the Waterflood project will be limited to 2450 MM BTU/hr to allow flexibility in the Company's decision making process.

BACT, as described in both the Increment II and the Waterflood PSD permits, will be applied to the gas-fired turbines and heaters proposed in the swap.

